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## What is claimed is:

1.	A computer program pro	duct for serializing data structure retrievals and updates, the
compu	iter program product emb	died on one or more computer-readable media and comprising

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computer-readable program code means for creating two identical tree structures, each representing an initial state for accessing stored data;

computer-readable program code means for performing searches against a first of the two trees;

computer-readable program code means for performing a first update against a second of the two trees, yielding a revised tree;

computer-readable program code means for switching the first tree and the revised tree, such that the first tree becomes the second tree and the revised tree becomes the first tree;

computer-readable program code means for performing, after operation of the computer-readable program code means for switching, a second update against the second tree, yielding a synchronized tree that is structurally identical to the first tree; and

computer-readable program code means for performing subsequent searches against the first tree.

2. The computer program product according to Claim 1, further comprising:

computer-readable program code means for obtaining an exclusive lock prior to operation of the computer-readable program code means for performing the first update; and

computer-readable program code means for releasing the exclusive lock after operation of the computer-readable program code means for performing the second update and the computer-

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- 6 readable program code means for switching.
  - 3. The computer program product according to Claim 1, wherein atomic transactions are used to maintain proper synchronization between the first tree and the second tree.
    - 4. The computer program product according to Claim 1, wherein the computer-readable program code means for performing the first update further comprises computer-readable program code means for queuing a transaction, and wherein the computer-readable program code means for performing the second update further comprises computer-readable program code means for applying the queued transaction against the second tree that results from operation of the computer-readable program code means for switching.
    - 5. The computer program product according to Claim 1, further comprising computer-readable program code means for performing a subsequent update against the synchronized tree that results from operation of the computer-readable program code means for performing the second update; and wherein operation of the computer-readable program code means for performing the subsequent update causes another operation of the computer-readable program code means for switching.
    - 6. A system for serializing data structure retrievals and updates in a computing environment, comprising:
      - means for creating two identical tree structures, each representing an initial state for

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4	access	sing stored data;
5		means for performing searches against a first of the two trees;
6		means for performing a first update against a second of the two trees, yielding a revised
7	tree;	
8		means for switching the first tree and the revised tree, such that the first tree becomes the
9	secon	d tree and the revised tree becomes the first tree;
10		means for performing, after operation of the means for switching, a second update against
i D	the sec	cond tree, yielding a synchronized tree that is structurally identical to the first tree; and
		means for performing subsequent searches against the first tree.
j J		
• 1 =	7.	The system according to Claim 6, further comprising:
<u>-</u> 2		means for obtaining an exclusive lock prior to operation of the means for performing the
<u> </u>	first u	pdate; and
<b>∔</b> 4		means for releasing the exclusive lock after operation of the means for performing the
5	secon	d update and the means for switching.
1	8.	The system according to Claim 6 wherein atomic transactions are used to maintain proper
2	synchi	ronization between the first tree and the second tree.
1	9.	The system according to Claim 6, wherein the means for performing the first update

further comprises means for queuing a transaction, and wherein the means for performing the

second update further comprises means for applying the queued transaction against the second

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- 4 tree that results from operation of the means for switching.
- 1 10. The system according to Claim 6, further comprising means for performing a subsequent
- 2 update against the synchronized tree that results from operation of the means for performing the
- second update; and wherein operation of the means for performing the subsequent update causes
- 4 another operation of the means for switching.
  - 11. A method for serializing data structure retrievals and updates in a computing environment, comprising step of:
  - creating two identical tree structures, each representing an initial state for accessing stored data;

performing searches against a first of the two trees;

performing a first update against a second of the two trees, yielding a revised tree;

switching the first tree and the revised tree, such that the first tree becomes the second

tree and the revised tree becomes the first tree;

performing, after the switching step, a second update against the second tree, yielding a

synchronized tree that is structurally identiqual to the first tree; and

performing subsequent searches against the first tree.

- 12. The method according to Claim 11, further comprising steps of:
- obtaining an exclusive lock prior to performing the first update; and
- releasing the exclusive lock after performing the second update and the switching.

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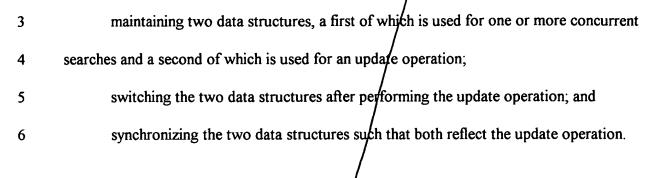
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- 1 13. The method according to Claim 11, wherein atomic transactions are used to maintain proper synchronization between the first tree and the second tree.
- 1 14. The method according to Claim 11, wherein the step of performing the first update further
  2 comprises queuing a transaction, and wherein the step of performing the second update further
  3 comprises applying the queued transaction against the second tree that results from operation of
  the switching step.
  - 15. The method according to Claim 11 further comprising the step of performing a subsequent update against the synchronized tree that results from performing the second update; and wherein the step of performing the subsequent update causes repeating the switching step.
  - 16. A method of serializing/access to data structures in a computing system, comprising steps of:
  - maintaining two trees, a first of which is used for one or more concurrent searches and a second of which is used for an update operation;
  - switching the two trees after performing the update operation; and synchronizing the two trees such that both reflect the update operation.
  - 17. A method of serializing access to data structures in a computing system, comprising steps
- 2 of:



18. The method of Claim 17, wherein the two data structures are B-trees.

